

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

Claim 1 (currently amended): An apparatus for mixing and maintaining particulates in liquid suspension, the apparatus comprising a reservoir for holding a fluid containing dispersed particles, said reservoir mounted inside an outer casing and having an open top, side walls, end walls and a base; a substantially horizontally-disposed mixing plate mounted inside the reservoir, the mixing plate having a plurality of vertical holes extending through the plate; and means for raising and lowering the mixing plate relative to the reservoir; wherein said means for raising and lowering the mixing plate inside the reservoir comprises at least one piston in contact with the outer casing of the apparatus and operatively connected to an air supply.

Claim 2 (previously presented): The apparatus as claimed in claim 1 wherein the reservoir further comprises means for adding samples in liquid suspension to the reservoir by means of a reagent feed pipe and means for removal or re-circulation of unused liquids from the reservoir by means of an overflow pipe.

Claim 3 (previously presented): The apparatus as claimed in claim 1 wherein the mixing plate contains an array of holes extending through the plate, the holes being in fixed relationship one with another.

Claim 4 (previously presented): The apparatus as claimed in claim 3 wherein the mixing plate contains an array of 24-, 96- or 384- holes.

Claims 5-6 (cancelled)

Claim 7 (previously presented): A method for mixing and maintaining particulate materials in liquid suspension, using the apparatus according to claim 1, the method comprising the steps of introducing a liquid suspension of particulate materials to the mixing chamber reservoir, actuating the mixing plate inside the reservoir so as to mix and maintain the particulate materials in liquid suspension.

Claim 8 (previously presented): The method as claimed in claim 7 wherein the particulate materials are selected from eukaryotic cells, prokaryotic cells, viral particles, glass beads, scintillant beads, magnetic latex beads, chromatography media, and controlled pore glass beads, wherein said scintillant beads are selected from the group consisting of PVT, polystyrene, yttrium silicate, and yttrium oxide.

Claim 9 (new): An apparatus for mixing and maintaining particulates in liquid suspension, the apparatus comprising a reservoir for holding a fluid containing

dispersed particles, said reservoir mounted inside an outer casing and having an open top, side walls, end walls and a base; a substantially horizontally-disposed mixing plate mounted inside the reservoir, the mixing plate having a plurality of vertical holes extending through the plate; and means for raising and lowering the mixing plate relative to the reservoir; wherein said means for raising and lowering the mixing plate inside the reservoir comprises a toothed drive wheel into which is set an eccentric peg which engages a slot in the outer casing of the apparatus.

Claim 10 (new): The apparatus as claimed in claim 9 wherein the reservoir further comprises means for adding samples in liquid suspension to the reservoir by means of a reagent feed pipe and means for removal or re-circulation of unused liquids from the reservoir by means of an overflow pipe.

Claim 11 (new): The apparatus as claimed in claim 9 wherein the mixing plate contains an array of holes extending through the plate, the holes being in fixed relationship one with another.

Claim 12 (new): The apparatus as claimed in claim 11 wherein the mixing plate contains an array of 24-, 96- or 384- holes.

Claim 13 (new): A method for mixing and maintaining particulate materials in liquid suspension, using the apparatus according to claim 9, the method comprising the steps of introducing a liquid suspension of particulate materials to the mixing chamber

reservoir, actuating the mixing plate inside the reservoir so as to mix and maintain the particulate materials in liquid suspension.

Claim 14 (new): The method as claimed in claim 13 wherein the particulate materials are selected from eukaryotic cells, prokaryotic cells, viral particles, glass beads, scintillant beads, magnetic latex beads, chromatography media, and controlled pore glass beads, wherein said scintillant beads are selected from the group consisting of PVT, polystyrene, yttrium silicate, and yttrium oxide.